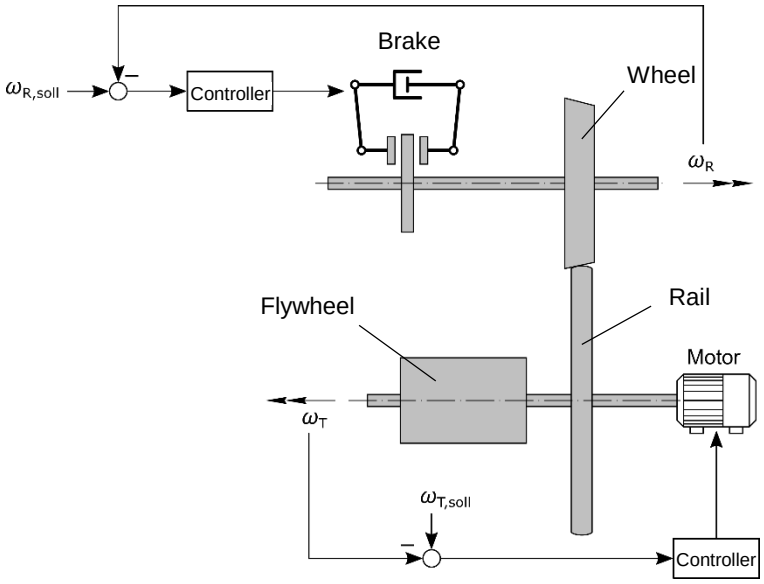
Bachelor/Master Thesis

Subject:
Development and Implementation of a Brake Slip Controller on a Roller Rig

Introduction:
The Institute for Rail Vehicles and Transport Systems (IFS) has a roller rig where the contact between a railway wheel and rail can be investigated. Especially braking operations, where high tangential stresses are acting in the contact surface, are of particular interest for investigations. It is desirable to perform the braking with a defined slip between wheel and rail.

The aim of the work is to improve the control of the pneumatic brake so that a desired slip can be obtained during braking. For this purpose, a control concept is to be developed which shall be tested in a simulation environment. Subsequently, the control system shall be implemented and optimized in the control system of the roller rig.

The work can also be carried out during the current corona pandemic.



Tasks:
- Literature study of controlling pneumatic brakes
- Development of a controller
- Testing the controller in a simulation environment
- Implementation of the controller in the roller-rig
- Documentation

Are you interested? Send me an e-mail to make an appointment.
The content and scope can be adjusted depending on the type of the thesis.

Contact person:
Martin Rakowitsch
Institut für Schienenfahrzeuge und Transportsysteme (IFS)
UG, Raum 120
Seffenter Weg 8, 52074 Aachen
Tel.: 0241 / 80 - 25554
E-Mail: Martin.Rakowitsch@ifs.rwth-aachen.de